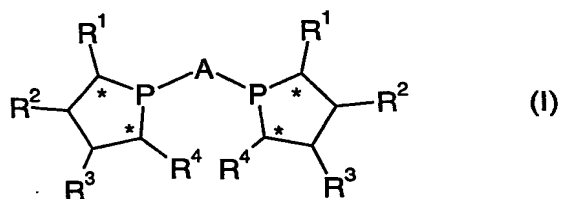


Claims:

1. Process for preparing enantiomerically enriched compounds of the general formula (I),



where

* indicates a stereogenic centre,

R¹ and R⁴ are each, independently of one another

(C₁-C₈)-alkyl, HO-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxy,

(C₂-C₈)-alkoxyalkyl, (C₆-C₁₈)-aryl, (C₇-C₁₉)-aralkyl,

(C₁-C₈)-alkyl-(C₆-C₁₈)-aryl, (C₃-C₈)-cycloalkyl,

(C₁-C₈)-alkyl-(C₃-C₈)-cycloalkyl,

(C₃-C₈)-cycloalkyl-(C₁-C₈)-alkyl,

R² and R³ are each, independently of one another, H,

(C₁-C₈)-alkyl, HO-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxy,

(C₂-C₈)-alkoxyalkyl, (C₆-C₁₈)-aryl, (C₇-C₁₉)-aralkyl,

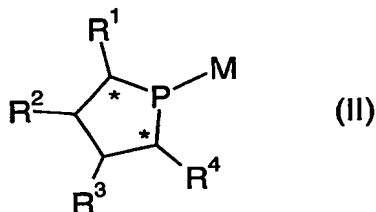
(C₁-C₈)-alkyl-(C₆-C₁₈)-aryl, (C₃-C₈)-cycloalkyl,

(C₁-C₈)-alkyl-(C₃-C₈)-cycloalkyl,

(C₃-C₈)-cycloalkyl-(C₁-C₈)-alkyl,

A is a C₂ bridge in which two carbon atoms have sp² hybridization,

by reacting compounds of the general formula (II),



where

R¹ to R⁴ can be as defined above,

M is an alkali metal or a trimethylsilyl group,

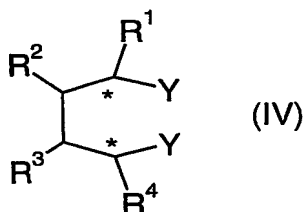
with compounds of the general formula (III),



where

A is as defined above and

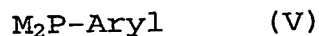
the radicals X are each, independently of one another,
a nucleofugic leaving group,
characterized in that the compounds of the general
formula (II) are prepared by reacting compounds of the
general formula (IV),



where

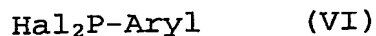
R^1 to R^4 are as defined above and

the radicals Y are each, independently of one another,
a nucleofugic leaving group,
with compounds of the general formula (V),



where

M is an alkali metal and Aryl is a (C_6-C_{18}) -aryl or
 $((C_1-C_8)\text{-alkyl})_{1-3}$ - (C_6-C_{18}) -aryl radical, and
subsequently with an alkali metal and, if appropriate,
additionally with trimethylsilyl chloride,
with the compounds of the formula (V) being obtained
by reaction of compounds of the general formula (VI),



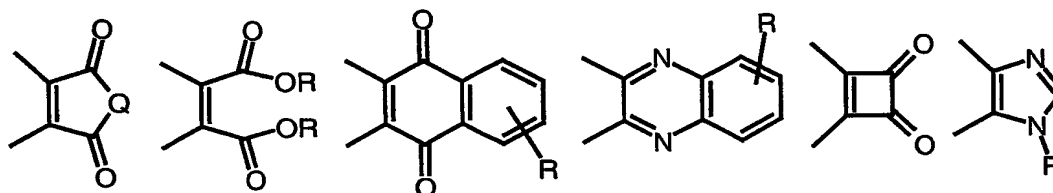
where

Aryl is as defined above,
with an alkali metal.

2. Process according to Claim 1,

5 characterized in that

A is a radical from the group consisting of



10 where

R is H, (C₁-C₈)-alkyl, (C₆-C₁₈)-aryl, (C₇-C₁₉)-aralkyl,
(C₁-C₈)-alkyl-(C₆-C₁₈)-aryl, (C₃-C₈)-cycloalkyl,
(C₁-C₈)-alkyl-(C₃-C₈)-cycloalkyl,
(C₃-C₈)-cycloalkyl-(C₁-C₈)-alkyl,
15 Q is O, NH, NR.

3. Process according to Claim 2,

characterized in that

Q is oxygen or NR, where R can be (C₁-C₈)-alkyl,
(C₆-C₁₈)-aryl, benzyl.

20 4. Process according to Claim 3,

characterized in that

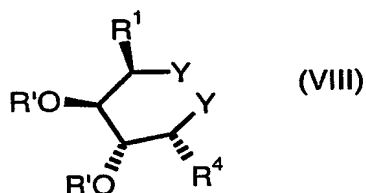
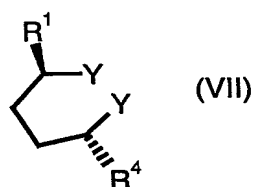
Q is oxygen or NR, where R can be methyl, ethyl,
propyl, isopropyl, tert-butyl, phenyl, naphthyl,
fluorenyl, benzyl.

25 5. Process according to one or more of Claims 1 to 4,

characterized in that

compounds of the formula (IV) in which R² and R³ are
each H and R¹ and R⁴ are each, independently of one
another, (C₁-C₈)-alkyl, HO-(C₁-C₈)-alkyl,
30 (C₂-C₈)-alkoxyalkyl are used.

6. Process according to one or more of Claims 1 to 5,
characterized in that
compounds of the general formula (III) or (IV) in
which X or Y is selected from the group consisting of
halogen, OTos, OMes, triflate, nosylate, are used.
7. Process according to one or more of Claims 1 to 6,
characterized in that
compounds of the general formula (VII) or (VIII),



where

the radicals Y are selected independently from the
group consisting of halogen, OTos, OMes, triflate,
nosylate,

R¹ and R⁴ are each, independently of one another,
(C₁-C₈)-alkyl, HO-(C₁-C₈)-alkyl, (C₂-C₈)-alkoxyalkyl,
(C₆-C₁₈)-aryl, (C₇-C₁₉)-aralkyl,
(C₁-C₈)-alkyl-(C₆-C₁₈)-aryl, (C₃-C₈)-cycloalkyl,
(C₁-C₈)-alkyl-(C₃-C₈)-cycloalkyl,
(C₃-C₈)-cycloalkyl-(C₁-C₈)-alkyl,

the radicals R' are each, independently of one
another,

H, (C₁-C₈)-alkyl, HO-(C₁-C₈)-alkyl, (C₆-C₁₈)-aryl,
(C₇-C₁₉)-aralkyl, (C₁-C₈)-alkyl-(C₆-C₁₈)-aryl,
(C₃-C₈)-cycloalkyl, (C₁-C₈)-alkyl-(C₃-C₈)-cycloalkyl,
(C₃-C₈)-cycloalkyl-(C₁-C₈)-alkyl,
are used for compounds of general formular (IV).

8. Process according to Claim 7,
characterized in that
R' is H, methyl, ethyl, propyl, isopropyl, tert-butyl,

phenyl, and

R¹ and R⁴ are each methyl, ethyl, propyl, isopropyl, tert-butyl, phenyl.

9. Process according to one or more of the Claims 1 to 8,
5 characterized in that
the alkali metal used is lithium.
10. Process according to one or more of Claims 1 to 9,
characterized in that
10 the reaction of compounds of the general formula (VI)
with alkali metals is carried out in an aprotic polar
solvent.
11. Process according to one or more of Claims 1 to 10,
characterized in that
15 the reaction of the compound (IV) with the compound
(V) is carried out at a temperature of from -25°C to
+40°C.
12. Process according to one or more of Claims 1 to 6,
characterized in that
20 the reaction of compounds of the general formula (VI)
with alkali metals is carried out at temperatures of
-10°C to +10°C.
13. Process according to Claim 1,
characterized in that
the reaction is carried out in a one-pot variant.